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ABSTRACT

This monograph relates the evolution, current status, issues, trends, and future perspective of undergraduate physical education teacher education (P.E.T.E.). The first section offers an historical overview of the profession. Preparation programs and curricula are described as they have progressed from the middle of the nineteenth century to the present, with a discussion of the increasing complexity of P.E.T.E. programs in response to changing educational philosophies. Societal influences on the development of curriculum for P.E.T.E. programs are considered in the second section, including government legislation, professional organizations, teacher preparation institutions, and employers and consumers. The third section deals with professional preparation curriculum in P.E.T.E. programs as it has been expanded and altered to meet not only more stringent certification requirements, but also the increasing trend toward specialization. The impact of the competency based teacher education movement on P.E.T.E. is also discussed. Contemporary views on the role and the responsibilities of the physical education teacher are considered in the fourth section. In the fifth section, a discussion is presented on the needs for further research in developing sound physical education curricula and the values of new teaching techniques in the field. The sixth section offers an overview of certification and accreditation of P.E.T.E. programs. In the final section, a discussion is presented on strategies for changing P.E.T.E., and recommendations are made for improving certification requirements, curriculum content, and process and methodology. Further recommendations are made for clarifying the role of professional physical education organizations and improving the administration of P.E.T.E. programs. (JD)

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Physical Education Teacher Education

CURRICULUM, PEDAGOGY, CERTIFICATION ...HISTORY, ISSUES, TRENDS

by Florence D. Grebner, Doris E. Henderson, Betty J. Keough, and Jo Mancuso

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PHYSICAL EDUCATION TEACHER EDUCATION

CURRICULUM, PEDAGOGY, CERTIFICATION

. . . HISTORY, ISSUES, TRENDS

by Florence D. Grebner, Doris E. Henderson,
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FOREWORD

Since 1861 when the first program offered instruction in anatomy, physiology, hygiene, and gymnastics, physical education teacher education (P.E.T.E.) has been evolving.

Today, programs are offered at more than 600 institutions of higher education and curricular options allow the preservice physical education teacher to specialize in a number of areas while receiving a general college education. Today, to ensure quality amidst such diversity, P.E.T.E. programs undergo critical evaluation via a national accreditation program. Today, to ensure competence, P.E.T.E. graduates must meet state certification standards wherever they seek public school teaching positions. Today, because of federal legislation, physical education programs from preschool through graduate school are barred from discriminating on the bases of sex and physical and mental handicaps. Today, P.E.T.E. graduates have an active profession to join, a profession that continuously works toward improvement.

The Clearinghouse acknowledges with appreciation the work of the four authors to write this account of P.E.T.E.'s evolution. They are Dr. Florence D. Grebner, professor and director of physical education, George Williams College, Illinois; Doris E. Henderson, assistant professor, and Dr. Betty J. Keough, professor of physical education, Illinois State University; and Dr. Jo Mancuso, chair, physical education and health, Lyons Township High School, Illinois. Thanks also go to the three content reviewers; their suggestions were useful in preparing the final manuscript.

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SHARON GIVENS
Editor, ERIC Clearinghouse
on Teacher Education

PREFACE

This monograph relates the evolution, current status, issues, trends, and future perspectives of undergraduate physical education teacher education in the United States. The authors do not intend to inject their philosophies or biases; nor do they present this monograph as an exhaustive review of the literature. Rather, this work represents an analysis of literature available to the authors.

Despite the abundant discussion of alternative roles in the literature, this document concentrates on the professional preparation of physical education teachers. The term teacher education, as used in this document, refers to the preparation of physical educators who become certified to practice, at least initially, in elementary and secondary schools. We use the term physical education to mean the science and art of education of and/or through the physical.

Because one cannot address physical education teacher education (P.E.T.E.) apart from teacher education in general, this monograph draws from the literature of teacher education as well as that of physical education.

While the literature adequately reflects the early history of physical education teacher education, a void exists regarding recent history. Perhaps due to the increasing specialization and diversity of professional roles, the purported fragmentation of physical education, and the expansion of knowledge in the field, the history of the last two decades contains only isolated accounts of events and trends. The literature also indicates other trends in P.E.T.E.--from universal standards to minimal standards; from technical training to pedagogy; from the profession as the primary body in establishing standards to government and professional preparation institutions as the primary bodies; from a one-course to a four-year curriculum; and from a content-centered to a teaching/learning-centered curriculum. These trends are discussed herein.

In addition, the monograph addresses selected contemporary issues relating to physical education teacher education: employment patterns, curricular issues, philosophical issues, clinical experiences, and certification alternatives.

The authors devote special attention to some current problems in physical education. For example, the literature suggests that those who have guided physical education suffer from a preoccupation with the present and a lack of understanding of the past. Ignoring the claim that knowledge doubles every five years, those preparing teachers have dwelt upon what must be learned for the present. The resulting lack of systematic planning is evident in a number of modern paradoxes: diversity versus universal standards; the normative concept inherent in competency-based teacher education versus individualized education; portability of certification on a national scale versus state and institutional autonomy; certification based on preservice experience versus

certification based on demonstrated inservice experience; the existence of a professional organization yet a lack of its direct involvement in licensure; and the isolation of preservice education from inservice education.

Finally, the authors attempt to shed light on the perplexing matter of change in physical education. On the one hand, teacher educators must prepare teachers to function in existing programs; on the other hand, they must prepare teachers to affect, and more significantly, control change. All too often, effort toward the latter goal is lost in effort toward the former.

Gratitude is expressed to the pioneering professionals who so responsibly recorded the past as prologue to the future. In addition, we acknowledge the practitioners who have given and are giving life to the printed word during the nearly 121-year history of professional preparation in physical education. To physical educators of the future we dedicate this monograph, with the challenge to guide the growth of physical education teacher education.

HISTORICAL PERSPECTIVES

In 1918, 20 institutions were preparing physical educators (Snyder and Scott 1954, p. 36). In 1929, 139 institutions were involved in the effort; in 1944, 295 institutions; in 1952, between 450 and 500 institutions (ICHPER 1968, p. 92); in 1963, 565 institutions; in 1967, 547 institutions. At present, 613 institutions prepare physical educators, but no one institution dominates the field.

The preparation and certification of teachers of physical education in the United States lack organization and consistency. State governments establish certification requirements; teacher preparation institutions plan programs of study; a national accrediting body evaluates the programs; and a professional organization seeks to influence all of these sectors via the development and dissemination of standards.

No universal curriculum or core, no model for curriculum, and no model programs exist for physical education teacher education (P.E.T.E.). The search for coherence in standards and certification is viewed as a local, not a national, issue. Hardly the products of a systematic evolutionary or revolutionary movement, P.E.T.E. curricula mirror a collective past, and show little consideration of the future.

History of Preparation Programs and Curricula

The following history of the preparation of physical education teachers draws from several accounts. Credit for the early history is due Zeigler (AAHPER 1962), a noted physical education historian. Other major sources include Snyder and Scott (1954) and Freeman (1977). For brevity, this monograph notes only salient events.

The first teacher preparation program in physical education in the United States opened in 1861 at Lewis' Normal Institute for Physical Education. The program offered instruction in anatomy, physiology, hygiene, and apparatus-free gymnastics. This curriculum reflected the range of physical education instruction in secondary schools--specifically hygiene, treatment of chronic diseases, German gymnastics, and exercises (AAHPER 1962, pp. 117-18). The curriculum also reflected the field of medicine, as medical study was the accepted preparation for administrative and supervisory positions in physical education at that time. Instruction at Lewis' Normal Institute lasted nine weeks and was available to both men and women (Snyder and Scott 1954, p. 33).

The program offered at the Turnerbund Normal School beginning in 1866 concentrated on anatomy, first aid, aesthetics in relation to gymnastics, gymnastic nomenclature, and practical instruction in the training of children (AAHPER 1962, p. 118).

In 1881, Radcliffe College became the third school to offer professional

preparation in physical education. At first, the program admitted only women; 23 years later when the school moved to Boston and became Sargent School of Physical Education, men were admitted (Snyder and Scott 1954, p. 33). This program concentrated on the German and Swedish systems of gymnastics and advocated a thorough medical examination prior to participation in physical activity (Freeman 1977, p. 70).

Little information exists about the nature of physical education curricula in state normal schools between the late 1860s and the beginning of the 1880s. History does record that one of the earliest teacher training programs for elementary physical education teachers began in 1881 at Wayne State University in Detroit, Michigan.

During the next two decades several more institutions opened programs to train physical educators, including Adelphi Academy, Brooklyn, in 1886 (Snyder and Scott 1954, p. 33). Two-year courses in theory and practice distinguished these curricula (p. 119) from the single-course programs that had typified earlier years. In the 1890s, both the first four-year program and the first five-year program (at Wellesley College) opened (pp. 122-23).

Because most early teacher education schools were proprietary, physical education professional programs remained shallow, void of a higher education context. Not until state-supported schools provided teacher education did P.E.T.E. curricula enjoy a broader context. The first state school to offer P.E.T.E. training in conjunction with liberal arts was Michigan State Normal School in 1894.

In the late 1800s, led by Kansas City and Boston, school districts, especially in larger cities, began to include physical education in their curricula (p. 35). Soon, prompted by an increase in demand for physical educators in public schools, more colleges and universities took up the preparation of physical education teachers. In 1900, the University of Washington became the first state university to offer teacher education in physical education; the first privately endowed liberal arts college to follow suit was Oberlin College, Ohio, in the same year (p. 34).

Physical education programs were slow to take hold in colleges and universities with their traditionally theoretical, liberal arts curricula (p. 211). Meanwhile, normal schools and other institutions already preparing physical education teachers expanded their programs to include history of physical training, history of civilization, physiology, principles of education, and languages and literature (p. 118). A few programs introduced expressive body movement to counter the emphasis on gymnastics. This "physical culture" was later absorbed by dance, but it was not to be a major focus in the preparation of physical educators for some time to come (Freeman 1977, p. 71).

During the 1890s, supporting the importance of physical education in public school curricula, John Dewey stressed the value of play and the learn-by-doing concept (Scott and Snyder 1954, p. 121). His philosophy emerged at about the same time as the philosophy of dualism--simultaneously educating the mind and training the body (Freeman 1977, p. 75). (Dewey's position was later questioned, and the value of physical education forever searched and challenged.)

In 1898 at Oberlin College, students trained as physical educators received the first A.B. degrees with specialization in physical education (AAHPER 1962, p. 123). Not until 1900 (Arnold College of Hygiene and Physical Education, Connecticut) was the first degree in physical education authorized. That degree was based on three years of study. In 1905, YMCA College in Springfield, Massachusetts, granted a three-year bachelor's degree and

four-year bachelor's and master's degrees in physical education (Snyder and Scott 1954, p. 34). The literature varies regarding the establishment date of the first four-year undergraduate degree program: Freeman (1977, p. 70) identified the North American Gymnastic Union, Indiana (formerly Normal School of the North American Gymnastics Union), as offering a bachelor of science in gymnastics in 1907. Freeman also indicated that in 1911, the University of Wisconsin offered the first bachelor's degree in physical education, based on four years of study. The Wisconsin curriculum included general academic, basic science, professional education, professional physical education, and practica. Both a major (40 credits) and a minor (14 credits) were developed.

With the emergence of degree programs specific to their preparation, physical educators began to take the place of physicians as directors of professional programs. Despite this movement in the period from 1900 to 1920, the tradition of physicians as directors continued until 1926.

Between World Wars I and II, public school curricula, and hence professional preparation curricula, typically included sports (individual and dual), aquatics, water safety, remedial physical education, and dance (primarily folk). During this period, intramural programs emerged as laboratories for instructional programs (p. 125). Professional preparation programs stressed the "new physical education," a patriotic program designed to improve Americans' physical fitness (Freeman 1977, p. 76).

Reflecting public school curricula from 1920 to 1960, preparation programs emphasized team sports and athletics. In 1927, representatives of institutions offering professional training in physical education met in Washington, D.C., to discuss the problem of the "coach versus the physical educator." While stopping short of establishing separate programs for coaches and educators, the conference did embrace the concept of broader training including all aspects of physical education. This reinforced the notion of unifying physical education and athletic coaching (AAHPER 1962, p. 128).

In the late 1920s, physical education leaders began to standardize physical education terminology and to study curricular content. The published standards recommended specific requirements in academic courses, foundation sciences, general education, and health and physical education. The standards emphasized teaching biological sciences as "tool" subjects rather than as ends in themselves, and urged the inclusion of social sciences (p. 130).

The notion grew that a P.E.T.E. curriculum should cover 136 semester hours. Arguing that the recommended four-year curriculum was too short to prepare a physical educator, several institutions planned five-year programs (p. 130). In the end, the former position dominated; arguing that the quality of training needed improvement before extending the length, most institutions continued four-year programs.

A 1934 study of 27 institutions revealed that physical education majors were at the bottom of all fields in terms of breadth and depth of academic training. This finding contributed to a heightened interest in general education and foundation sciences that has continued to this day (p. 126).

With its organization well underway, the physical education profession became more active in curricular improvement. In 1948, the first of what now numbers six major national conferences (discussed further in the next section) placed the burden of P.E.T.E. on teacher-preparation institutions. The conference set aside the notion of a standardized curriculum and standard number of credits in favor of each institution establishing objectives, and designing a curriculum to meet those objectives (pp. 131-32). However, a 1962 national conference revived the notion of setting forth national standards for curricula, course work, and credits (Freeman 1977, p. 283). The standards

that emerged were more stringent than ever before.

Also following World War II, physical education began to split into special interest areas--health, safety, recreation, dance, and fitness. In 1955, the area of fitness gained momentum from President Dwight D. Eisenhower's Council on Youth Fitness, which set a precedent for subsequent presidential councils. In 1957, as reaction to Sputnik pushed education toward the sciences, physical education programs fell into jeopardy. Again, the mind-body dualism was argued (p. 79).

During the late 1960s, educators bolstered the role of general education in P.E.T.E. curricula and made progress toward a five-year curriculum (ICHPER 1968, p. 115). Greater stress was placed on preparing educators for elementary schools, and on activities such as folk dance, swimming, gymnastics, track and field, basketball, and apparatus for both elementary and secondary schools. For both levels, the professional program included introduction to the profession, curriculum and instruction, administration, history, philosophy, physiology of activity, kinesiology, measurement and evaluation, adaptive physical education, health, safety, and recreation (p. 107). Also, more emphasis was placed on student teaching and the use of media (p. 94). The continuing debate regarding generalization versus specialization opened during this time.

Several emphases in physical education programs in the late '60s grew out of trends in general teacher education. As the focus shifted from teacher behavior to learner behavior, physical educators began to speak of written objectives for lessons and ways to judge mastery of the objectives (Palmatier 1977, pp. 3-4). Demands for relevance led to competency-based education, focusing first on learner competencies, then on teacher competencies. The emphasis on competence brought increased involvement in field experiences during this period (p. 5).

In the early 1970s, teacher education stressed individual differences, instructional techniques that promote self-directed learning, and the spirit of a global community (Jewett 1978, pp. 1-22). In addition, programs in physical education stressed lifelong activities (Ernst 1973, pp. 39-46). During this period educators continued questioning the term physical education (AAHPER 1974, p. 23). Harper (Lawson 1981, p. 88) offered four definitions of physical education, each suggesting a different approach to professional preparation: the study of human movement; activities in the form of sport, games, dance, and exercise; kinesiology; and human movement and sport. The issue of "education of versus education through the physical" was revived. The late '70s saw the merging of men's and women's professional preparation curricula (Parks 1980), which may be the most significant P.E.T.E. event of the decade.

Current professional preparation in colleges and universities resembles that which existed in the normal schools. In general, P.E.T.E. programs stress general education; foundation sciences, especially biological sciences; professional education; and a major. The generally accepted minimum length of study is four years. Most institutions emphasize clinical experience, an orientation toward the whole child, and experience with special populations and in multicultural settings. A trend has emerged toward competency-based learning and competency-based teacher education. The distinction between physical education, health, leisure studies, and in many cases, dance stands firm.

Overview of the Profession

In its first quarter century beginning in 1861, professional teacher preparation in physical education went without a professional organization. Physicians produced the early curricula and continued to influence curricular development well into the 1920s. As more and more professional physical educators were graduated, the need for a professional organization grew.

In 1885, William Anderson, M.D., called together interested "gymnasium teachers and directors of gymnasia" (Freeman 1977, p. 72) to formulate the Association for the Advancement of Physical Education (AAHPER 1962, pp. 120, 133). The purpose of the association was clear--to provide direction for the development and refinement of P.E.T.E. programs and to serve as a forum for practicing professionals.

Although the association's title at first referred only to physical education, its mission embraced health and recreation as well. Health appeared in the title in 1937, followed a year later by recreation. Finally, in 1979, following much debate, dance was added to the title. Having undergone these title and structural changes through the years, the current professional organization is the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD).

In the first 50 years, association meetings addressed such topics as: the pros and cons of German and Swedish gymnastics, with the latter being preferred; the need to develop an American system of gymnastics; the need for physiological research (Freeman 1977, p. 73); the need to standardize the terminology of the profession; the desirability of standardizing curricular content and length; and, as early as 1927, the problem of the coach versus the physical educator (AAHPER 1962, p. 128).

Meanwhile, other professional groups formed. In 1895, the National Education Association organized a physical education division (Freeman 1977, p. 78). In 1926, the Academy of Physical Education was conceived; the organization was founded officially in 1930 (p. 78).

Currently, AAHPERD* includes seven associations representing subdisciplines of the Alliance. The association providing leadership for P.E.T.E. is the National Association of Sport and Physical Education (NASPE). Within NASPE, the Council on Physical Education for Children, the Secondary School Physical Education Council, and College and University Physical Education relate specifically to the preparation of professional physical education teachers.

Trends in Curricula

A concerted effort has been made to clarify the body of knowledge of physical education and develop skills to impart that knowledge. Activity units serve as media through which ideas and information are conveyed.

P.E.T.E. programs have kept pace with general trends in education: individualization, humanization, whole student, specialization, behavioral objectives, and global education, among others. The general education component of P.E.T.E. curricula now extends beyond traditional humanities, sciences, and social sciences to groupings based upon problems associated with

*It is not the intent to identify the total structure of AAHPERD, but to show its link with the preparation of teacher education.

societal change (AAHPER 1974, p. 178). A sampling of trends in physical education follows.

Specialization. Perhaps most noticeable of the recent trends in P.E.T.E. (Freeman 1977, p. 309), specialization has been accompanied by a clarification of the subdisciplines of the field. The approach formerly considered most appropriate for graduate study--that is, concentrating on one aspect of physical education--is now considered appropriate for undergraduates. Students commonly specialize in coaching, elementary physical education, interdisciplinary fields (e.g., sports journalism, sports marketing), activities (e.g., aquatics, dance, gymnastics, sports), adaptive physical education, or athletic training. Curricular designs that include specializations are typically core-based.

Humanization. Humanistic education, another important trend especially in recent years, "implies that the focus of the teacher, the classroom and the school is on the human--the person . . . . It emphasizes the importance of the student's real experience as a whole" (Gunnison 1976, p. 164). Humanistic learning involves students' feelings; it takes into consideration what and how the student wants to learn. In essence, the teacher continuously adjusts learning to the student's learning style. As Locke and Lambdin stated,

> In its theoretically pure form, individualized instruction makes the learning characteristics of individual students the paramount factor in determining teacher behavior. Individualized instruction includes any pedagogical strategy that leads the teacher to adjust objectives (ends) or content, instruction and practice (means), or all of those elements, to produce the most appropriate match with the characteristics of individual students. (1976, p. 33)

Research reveals that teachers who convey unconditional care and respect help their students score higher on achievement measures than teachers with less interpersonal skill (Gunnison 1976, p. 167). Nonetheless, Locke and Lambdin suggested caution regarding humanized instruction. Teachers need to investigate and observe the many humanistic strategies. "Individualizing instruction is not so much a method of instruction as it is a distinct way of thinking about learning and the respective roles of the teacher" (Locke and Lambdin 1976, p. 34).

Improved Training for Inner-City Teaching. Teacher educators have borne criticism for their inability to prepare teachers to perform effectively in inner-city schools. Teachers develop inner-city know-how from experiences on the job rather than from training programs, according to Robert T. Wheeler, assistant superintendent in Kansas City (AAHPER 1970). Lewis Hess, chairman of physical education at Ohio State University, confirmed Wheeler's view:

> Most of us in teacher preparation institutions do not know what is actually going on in the public schools. We are not getting into the public schools to acquaint ourselves with their problems. We are using obsolete methodology. (p. 10)

Wheeler also attacked the common attitude that inner city children cannot learn, pointing out, "The real ability to learn is distributed among the economically depressed and among racial minorities in the same fashion as it is distributed among the economically fortunate and the racial majority" (p. 3). Teachers "inherently reject the inner city child and his environs," he stressed, adding that in many cases teachers accept positions in the inner city only in a spirit of "martyrdom" (p. 7).

Training programs do not prepare teachers adequately, especially in educational psychology, Wheeler charged, emphasizing the following points:

> Too little effort is put into understanding thoroughly how the life circumstances of the inner city may influence a different tempo of development of the inner city child . . . . Too little effort is put into understanding the dynamics of the learning process and its effective application in the inner city classroom. (p. 7)

Lawrence E. Houston, an administrator with the Los Angeles, California, schools, criticized the content of physical education in inner city schools. He remarked, "It seems useless to teach students such lifetime sports as tennis, golf, and swimming when the facilities are either too far away or too expensive for regular participation. The curriculum must be more relevant to each child's environment" (p. 14).

Two states, Minnesota (AAHPER 1970, p. 79) and Wisconsin--at the University of Wisconsin at Oshkosh (1977, p. 25)--have developed programs that require teacher education majors to prepare more realistically for teaching inner-city children from diverse racial, economic, and religious backgrounds. Wisconsin mandates that all students preparing to teach in the state must take courses in human relations and methods for working with pupils in the inner city, with economically deprived children, and with students from multicultural backgrounds (The Human Relations Code: Teacher Certification Guidelines 1977, p. 7). Requirements may be fulfilled by course work, self-initiated experiences, cross-cultural student teaching, field experience, university placement in Latino Factory Projects, or previous experience completed within two years of graduation (pp. 7-8).

Separate Preparation of Teachers and Coaches. In contrast to the current practice whereby most physical education programs prepare teacher-coaches (Lawson 1981, p. 97), a trend has developed toward distinguishing between preparation for coaches and preparation for teachers (Freeman 1977, p. 292). In some institutions, coaching is a specialization that teacher education students may select; elsewhere, it is the major area of study. Although a number of states have begun to certify coaches, there is no evidence of movement toward a degree centered on coaching. Athletic training appears to be following the same trend, having established a national certifying body, the National Athletic Trainers Association.

Competency-Based Teacher Education. Competency-based teacher education has received much attention recently. The concept rests on the notion that teachers must possess certain knowledges and skills to be effective. To be certified, a teacher-candidate must demonstrate the required skills. However, the relationship between teacher skills and student learning needs further empirical study.

Curriculum Design. Another movement urges the involvement of all departments in a college or university in the formulation of teacher education curricula--a reaction to the isolation of specialists in education, and specifically physical education. This trend represents a sound principle of curriculum planning--that of involving all who have an investment in a program (Freeman 1977, p. 294). On the other hand, under such a scheme, 60 to 80 percent of an education student's preparation may fall to those with little concern for teacher education and little respect for teaching as a vocation (U.S. Office of Education 1972, p. 65). An accompanying trend is the reversal of the isolation of institutions preparing teachers from employers of those teachers (p. 65). This trend acknowledges that professionals are to be prepared in light of the role to be performed. Employers are responsible, in large part, for shaping the roles.

Paraprofessionals. The training of paraprofessionals in physical education is a small but growing part of teacher education programs (Freeman 1977, p. 293). Paraprofessionals might well fit in a larger plan of differentiated staffing, as is common in other professions.

Trends in Supply and Demand

Although the literature of the past decade depicts a surplus of teachers in general, actual supply and demand are difficult to assess.* Uncertainties such as pupil-teacher ratios, the place of co-curricular assignments in the regular work load, drop-out and drop-in patterns among students, the role of private schools, the number of young people entering teacher education programs, the number of teachers approaching retirement, leaving, or returning to the profession, the availability of early retirement, and the effect of unemployment levels on youths' decisions to remain in or return to school--all of these demographic forces confound the analyst. Moreover, supply and demand as related to teacher education varies regionally (U.S. Office of Education 1972, p. 53). For example, rural areas appear to have the most difficulty attracting teachers, while some suburban and urban areas experience surpluses. Most city school districts appear to have no difficulty filling vacant positions (Dunathan 1979, p. 21).

In the 1950s, between 65,000 and 90,000 qualified graduates were available for teaching positions in the United States. That figure was predicted to nearly triple between 1950 and 1980, but in the '60s demand surpassed supply. In the 1970s, what had been a teacher shortage quickly became a teacher surplus (Palmatier 1977, p. 3). Razor (1975, p. 54) predicted a surplus of a quarter million beginning teachers by 1979, and his forecast for the early '80s called for a surplus in the millions.

In a 1980 study, the Association for School, College, and University Staffing (ASCUS) Research Committee reported the following figures for the number of teacher education graduates from selected institutions in the United States: From 1971-72 to 1978-79, the number of graduates dropped 49.1

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*Various offices regularly assemble and disseminate data on supply and demand. The reader is referred to documents published by the National Center for Education Statistics, Washington, D.C., and the American Educational Research Association, New York.

percent; however, 1978-79 to 1979-80 saw only a 2.55 percent reduction in teacher education graduates (1980, p. 3). ASCUS reported that in 1965, 22 percent of all freshmen entering U.S. colleges intended to become teachers, but by 1975 only 6.5 percent of entering freshmen intended to become teachers. This study indicates that although present supply exceeds demand, a reversal of that trend may occur as fewer students enter teacher education.

From such data, surveys, and predictions about the demand for teachers in general, it is difficult to extract meaningful, accurate information about specialized fields. However, one can trace trends in the supply and demand of physical education teachers to the early 1920s when physical education became standard in public school programs and demand increased. Supply gained on demand until the Great Depression stemmed the growth in demand for physical education teachers. "Many schools either discontinued physical education programs or expanded the work load of the physical educator. Few new people were hired, a situation which soon resulted in an oversupply of teachers" (AAHPER 1962, p. 125). As a result, many institutions revised their physical education curricula and initiated selective admissions. Some states also revised their certification standards.

Supply and demand continue to vacillate as employment rises and falls according to local priorities. For example, in the 1960s, physical education teachers capable of directing gymnastics, swimming, and wrestling received the warmest reception from employers (Indiana State University 1970, p. 4). For the 1980s, Lawson (1981, p. 97) contended that elementary school physical education specialists are a low priority, while secondary schools will employ physical education teachers who also can coach. This finding contradicts a 1970 National Education Association (NEA) report that showed the demand for elementary specialists to be greater than the demand for secondary physical education teachers. In that report also, women were encouraged to seek combined majors with mathematics, English, or other academic subjects.

Between 1978 and '80, four research studies indicated an overall surplus of physical educators, but with regional and grade level variations. A 1979-80 national Survey of Teacher Demand and Shortage (National Center for Education Statistics 1981) found that health and physical education were among the teaching fields with the lowest layoff rates and the smallest shortages. Still, though, unrenewed contracts were 11 times greater than the reported shortage. During that spring, 158,000 health and physical educators, representing 6.2 percent of all employed teachers, worked in public and private elementary and secondary schools in the United States. Of this number, 1,100 lost their contracts; this figure represented 4.7 percent of all layoffs of teachers, but only 0.7 percent of all employed teachers. From the sample of institutions responding, NCES estimated a shortage of only 100 (rounded to the nearest hundred) health and physical educators out of a total shortage of 11,300 teachers in all areas. The shortage represented 0.1 percent of all employed health and physical education teachers.

An NEA survey (1979, p. 14) revealed that some 7,700 male beginning physical education teachers were prepared to teach secondary physical education; of those, 5,500 would seek 1,600 available positions. At the elementary level, NEA reported a teacher shortage: Only 1,100 beginning teachers were prepared in 1979 to fill 1,500 available positions. (The survey made no distinction by sex.)

In a 1979 survey of half (1,409) the school superintendents in a nine-state region of the Midwest, 75 percent reported a teacher surplus, and 20 percent a surplus of physical education teachers. The only state in this study reporting no surplus was Nebraska (Dunathan 1979, p. 121).

Finally, a group of college placement directors surveyed in 1979 for a national study reported a surplus of male and female secondary physical educators; four states--Florida, North Dakota, Texas, and Utah--reported a balanced supply and one--Colorado--reported a shortage. The surplus of male secondary physical educators appeared slightly greater; 23 of 34 states reported a surplus, five reported a considerable surplus, and four--Alabama, Massachusetts, North Dakota, and Texas--reported a balanced supply. None of the directors indicated a shortage in their states of male secondary physical educators (ASCUS Report 1980, p. 5).

Although most of the country is experiencing a surplus of teachers in physical education and other subjects,

> the truly outstanding candidate generally has found opportunity even in those fields which are said to be crowded. The average candidate, however, has experienced considerable difficulty in securing a teaching position in a crowded field. (p. 8)

The literature points to a shortage of teachers in the 1980s, and predicts "that physical education is moving toward a more balanced state" (p. 16), but it records little effort to shrink the present gap between supply and demand. Do students have a right to select a field in which an existing surplus reduces opportunities for employment for those already in the field? Is equilibrium desirable, and if so, what can be done to establish and maintain it? Does a surplus benefit the public? Has the surplus encouraged improvements in physical education? Can the profession use surpluses to enhance standards? These questions warrant serious investigation by the physical education profession.

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SOCIETAL INFLUENCES

Education--especially public education--stands at the forefront of society's concerns, engulfed by a crescendo of criticism. Inflation, rising costs, and unemployment impinge upon the effectiveness of public education. Razor has described the situation as a "crisis (of) confidence among the general public, school boards, faculty, and students about the capacity of education to perform its intended function which changes annually and invariably becomes broader in scope" (1977, p. 2). Much of the dissatisfaction about public education is aimed at the quality of instructional programs, and thus, at teachers and their professional training. Admittedly, some teacher-education programs are outdated, preparing prospective teachers for students and schools that no longer exist. For the majority of P.E.T.E. programs, the problem of quality is often tied to demands imposed by external forces.

Influences that bring about curriculum development and change in teacher education fall into the following categories: (1) government legislation, (2) professional organizations, (3) teacher-preparation institutions, and (4) employers and consumers.

Government Legislation

In the past decade, Congress increased the number of federal programs designed to improve and extend educational services to special, heretofore neglected populations. Two pieces of federal legislation have had dramatic influence upon physical education programs in both public schools and teacher-education institutions: Title IX of the Education Amendments of 1972 and Public Law 94-142, the Education for All Handicapped Children Act of 1975.

Title IX. Title IX prohibits discrimination by sex in educational programs that receive federal monies. The law explicitly forbids discrimination in any academic, extracurricular, research, occupational training, or other program operated by an educational institution. This provision requires that staffing and enrollment in most classes, including physical education, be open to both sexes and that participation in physical education courses not be denied or required on the basis of sex. Physical education departments must no longer be labeled by sex, and departments must develop policies, regulations, and procedures applicable to males and females alike. The law further demands equity in extracurricular activities including intramurals, interscholastic/intercollegiate athletics, and clubs.

With the passage of Title IX, traditions that had stood for decades were changed or abolished. The law compelled physical educators to examine practices that had characterized their field--for example, the tradition of

separate programs designated by sex at all educational levels including teacher preparation. For the most part, sexually segregated departments, philosophies, and curricula in P.E.T.E. programs have become single departments with common philosophies and programs.

The command to merge programs forced curricular analysis and evaluation. Harrington and Gordon (1975, p. 1) pointed out that individuals within the profession differed over the implementation of Title IX. In some institutions, faculties merely combined programs without adjustment; elsewhere they selected the best from each program to create a new single program. Some faculties saw Title IX as an opportunity to create innovative P.E.T.E. programs.

Although the U.S. Department of Health, Education, and Welfare issued guidelines for carrying out Title IX in elementary and secondary schools (Parks 1980, p. 49), no such guidelines appeared for professional teacher education programs including physical education. If anything, the merging of men's and women's departments in universities and colleges for economic reasons helped to prepare more undergraduate P.E.T.E. candidates for teaching coeducational classes. The merging of methodology, instructional techniques, and curricular development showed that the preparation of male and female physical educators was more alike than different.

At the 1979 AAHPER convention, Bain (1979) reported a survey conducted with her secondary school physical education methods class at the University of Houston regarding Title IX and nondiscrimination. The survey found--

1. that male students showed more concern than females about executing Title IX;
2. that the historical exclusion of women from sport may cause male coaches to distrust their female colleagues' abilities;
3. that male personnel may be less capable of effectively conducting a physical education class with multiple skill and strength levels, as would be the case in coeducational physical education classes;
4. that because expectations influence performance, preservice teacher education curricula that speak to females' sport potential must be developed and emphasized to eliminate the attitude that girls should not engage in athletics;
5. that neither male nor female respondents feared that the acceleration of women's involvement in sports would seriously threaten sex-role identification.

Studies have shown that students more often than teachers opt for integrated physical education. In San Diego, California, a survey of students enrolled in coeducational physical education revealed that 76.6 percent of the female students and 51.7 percent of the male students preferred integrated physical education. The same group indicated that "coaches were 'dragging their heels' by too often providing only 'token integration'" (Mikkelson 1979, p. 63). Most of the students said they were comfortable in coeducational physical education. They were less enthusiastic if their teacher was of the same sex as in the year before coed classes, but more so if the teacher was of the opposite sex.

Although it may not be necessary to develop courses specific to teaching sex-integrated physical education, it does behoove physical education teacher educators to provide teaching experiences in coeducational settings prior to student teaching.

Public Law 94-142. In 1975, President Gerald Ford signed P.L. 94-142, the Education for All Handicapped Children Act, requiring the inclusion of physical education in handicapped children's curricula. The law implies that physical educators must provide handicapped children and youths attending public schools either with motor experiences similar to those provided for nonhandicapped students or with programs designed especially for handicapped individuals (Bird and Gansneder 1979, p. 464).

In October 1977 when P.L. 94-142 became fully effective, teachers were caught off guard. Jansma observed, "Many physical educators must teach physical education to a group of both handicapped and nonhandicapped pupils for which most are unprepared" (1977, p. 15). Two years later, in their survey of more than 900 public school physical educators in Virginia, Bird and Gansneder (1979) found that a majority of respondents felt inadequately prepared to provide motor experiences for handicapped individuals. Moreover, Smith and Schindler's (1980) survey of state certification requirements showed that only half the states had acted purposefully to require field experiences with or course work on exceptional children in response to P.L. 94-142.

DiRocco (1978) offered two reasons why teachers fail to adequately serve handicapped children:

1. Teachers do not understand how handicaps affect the ability to move, nor how to compensate with alternative methods or programs.
2. Teachers have negative attitudes toward working with handicapped children.

To develop positive attitudes, DiRocco insisted:

> Our students must receive an adequate amount of information concerning the nature of handicapping conditions and of the movement abilities of handicapped students so that they will not feel threatened when placed in a mainstreamed situation . . . . This information must come from various sources within the department so that the students will accept working with handicapped students as a normal responsibility of all physical educators. (1978, p. 25)

Dirocco recommended incorporating P.L. 94-142 into physical education courses by means of modules. An introductory course, for example, might include a section on the history and role of physical education for handicapped persons; biomechanics, a section on the effects of physical disabilities on movement; growth and development, a section on the effects of delayed maturation; sport sociology-psychology, a section investigating competition and socialization. He also stressed the importance of designating a coordinator to oversee the development, execution, evaluation, and revision of the mainstream program within P.E.T.E.

Federal funds have supported programs to train personnel to cope with the demands of P.L. 94-142. A 1976 AAHPER publication, Professional Preparation in Adapted Physical Education, Therapeutic Recreation and Corrective Therapy, listed the following efforts to prepare physical education teachers:

- The U.S. Department of Health, Education, and Welfare, Bureau of Education for the Handicapped (BEH) sponsored regional workshops to identify training needs and develop plans to meet these needs in each state. State teams included representatives from physical education, recreation, and special education.

- o Individuals or teams held one-day workshops in Hawaii, Mississippi, Alabama, and Wisconsin.
- o Leadership seminars jointly sponsored by the Southern Regional Education Board, the Joseph P. Kennedy Jr. Foundation, and AAHPER included representatives from 15 southern states.
- o District and state workshops were coordinated among the six AAHPER geographic areas.
- o Cadre team-training approaches developed in Project ACTIVE (New Jersey) prepared resource personnel to train teachers of adapted physical education programs. Projects DISCOVER and I CAN (Michigan) emphasized inservice and preservice training opportunities for personnel working with handicapped children.
- o State HPER associations and various college and university departments of HPER sponsored formal and informal inservice programs, orientation activities, and training and retraining projects. (AAHPER 1976, pp. 9-11)

The same publication cited characteristics of college and university professional preparation programs:

- o Most programs emphasize traditional course work such as physical education for the mentally retarded, adapted physical education, or physical education for the orthopedically impaired.
- o Types of preparation range from one course to intensive specialization including many courses; a variety of majors, minors, concentrations, options, and specializations are offered.
- o Programs embrace a variety of training approaches ranging from traditional to flexible, e.g., competency-based curricula.
- o Interdisciplinary approaches are becoming more prevalent.
- o Programs frequently include practica or clinical experiences. (AAHPER 1976, pp. 10-11)

Many states have responded to this federal legislation by changing certification requirements to ensure that prospective teachers are prepared to work with children who have handicaps. For example, Missouri, Georgia, and Colorado required all teachers to have at least one survey course in special education; Pennsylvania required that physical education teachers be certified in both physical and special education; California required special certification for teachers of remedial physical education for physically handicapped minors; and New Jersey set minimum skill or course requirements for adapted physical education teachers (AAHPER 1976).

The education community will continue to feel the effects of P.L. 94-142 throughout the '80s as P.E.T.E. programs evolve to meet the realities of public school instruction.

State government. The quality and content of professional preparation and certification programs are the legal responsibilities of specific agencies within each state. In times of teacher shortages, states tend to lower standards. In times of surplus, standards rise. The influence of state government and examples of state legislation that upgrade professional preparation certification programs are discussed in chapter six, "Certification and Accreditation."

Professional Organizations

Historically, AAHPERD has led in developing and disseminating standards for professional preparation, including the preparation of physical education teachers (Lawson 1981, p. 84). The association's national conferences have emerged as forums in which standards are defined and disseminated. In reviewing these conferences,* Anderson indicated that earlier meetings sought the best way to prepare a person to teach physical education in schools, resulting in the development of standards for professional preparation (pp. 4-8). In contrast, the 1980 conference looked at alternative ways to prepare physical educators rather than endorse one method. Bain concurred with Anderson's review and indicated that the willingness of the National Association for Sport and Physical Education (NASPE) during the 1980 national conference to publicly affirm alternatives rather than a single approach to professional preparation was an important step. Bain also noted the conference's shift from teacher orientation to discipline orientation (p. 81).

AAHPERD's current influence on P.E.T.E. is unclear. According to Razor (Midwest District-AAHPER 1977, p. 3), the role of the physical education professional organization is little appreciated and poorly understood. However, NASPE and its councils and 10 academies, all of which are part of the Alliance, have been asked to develop a list of teaching skills needed by the physical education generalist. These skills will be compiled in the form of guidelines for professional preparation. NASPE's Adapted Physical Education Academy is developing a similar list for the specialist who works primarily with disabled students and for the generalist who teaches disabled students mainstreamed in regular physical education classes. The identification of these skills could influence certification standards in adapted physical education (Hurley 1981, p. 43).

As members of state professional associations affiliated with AAHPERD, physical educators may work to (1) influence state legislation affecting the field, (2) adjust certification standards, (3) cooperate with state boards of education in writing guidelines for the field, and (4) hold workshops and conferences. Although these efforts seem vital to the profession, it is impossible to ascertain their influence on P.E.T.E. programs.

The American Association of Colleges for Teacher Education (AACTE), representing 725 schools, colleges, and departments of education nationwide, holds considerable influence over the accreditation process at the national level, certification at the state level, and undergraduate teacher preparation programs at the local level.

The National Association of State Directors of Teacher Education and Certification (NASDTEC) significantly affects teacher education programs by issuing standards for acceptable preparation programs. States usually base their standards for teacher education partly on NASDTEC standards.

The Council of City and County Directors of Physical Education, an arm of

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*National Conference on Undergraduate Professional Preparation in Health, Physical Education, and Recreation, West Virginia, 1948; Graduate Study in Health, Physical Education, and Recreation, Illinois, 1950; Professional Preparation in Health, Physical Education, and Recreation, Washington, D.C., 1962; Preparing the Elementary Physical Education Specialist, Missouri, 1972; Professional Preparation in Dance, Physical Education, Recreation, Recreation Education, Safety Education, and School Health, Washington, D.C., 1974; Undergraduate Physical Education Programs, Illinois, 1980.

AAHPER, held a national conference in 1969 on "Preparing Teachers for a Changing Society." At the conference, city and county directors and professional preparation personnel discussed teacher education. Participants called this one of the most productive and significant meetings ever sponsored by AAHPER. It represented one of the few times that a national conference was specifically structured to encourage public school personnel and professional teacher educators to explore together the problems confronting physical education (AAHPER 1970, pp. iii-iv).

Only Illinois has a professional organization--the Illinois Association for Professional Preparation in Health, Physical Education, and Recreation (IAPPHPER)--that exists for the exclusive purpose of improving professional preparation. Composed of representatives from institutions engaged in preparing teachers, IAPPHPER influences the state Board of Education regarding certification standards.

Teacher Preparation Institutions

Open admissions policies in colleges and universities may lower both the admission requirements for P.E.T.E. programs and the quality of the programs. Many colleges and universities admit students regardless of their abilities (Freeman 1977, p. 295), but with budget constraints and a surplus of physical education teachers, that tendency may change. Moreover, while entrance into a training program may be a student's right, entrance into the profession remains the prerogative of the profession. Many physical educators have expressed interest in raising P.E.T.E. standards.

The quality of teacher preparation programs in physical education, as in all subject areas, rests with individual institutions. Although programs must reflect teacher certification requirements, curriculum design usually falls to individual physical education faculties. Diversity characterizes the more than 1,300 institutions in the United States offering undergraduate teacher preparation; quality ranges from inadequate to exemplary, depending on the commitment and expertise of the faculty (Razor 1977, pp. 2-3). Bunnell (1981) pointed out that the variety of organizational and administrative structures governing physical education in universities and colleges accounts for philosophical and practical differences among P.E.T.E. programs.

Differences in quality also result from disparate certification standards. Some states pose no minimal specifications; in others, standards are so loosely constructed that almost any set of courses suffices. Gress noted, "Few organizations could survive, to say nothing of perform, with the bizarre disjunction between function, authority, and responsibilities which exists in teacher education" (1977, p. 416).

Discussing teacher education reform, Smith wrote,

> Let's face it: Colleges of pedagogy will in all probability never overhaul their programs if each college is to do it alone. There are too many hurdles, too much disparity among institutions, too much institutional jealousy, too much divisiveness and lethargy among faculties, too much fear, and too much ineptness in the leadership. (1980, cover)

One of the authors of Design for a School of Pedagogy (Smith, Silverman, Borg, and Fry 1980), Smith elaborated on the following points: that changes in programs may cause enrollments to decline and tenured faculty to lose their

jobs; that reform is stymied by faculty rivalries over pedagogical philosophies; that the tendency in teacher education courses to instruct and evaluate according to the level of students rather than the needs and welfare of the profession is reprehensible; that pedagogy should be recognized as a clinical--as opposed to an academic--study, which leads to competence in teaching and not necessarily to erudition in pedagogy; and that pedagogical curricula should satisfy the needs of the working professional rather than the interests of instructors. Smith concluded that "both the public and state governments are in the mood to act constructively" to improve education, but he noted that they need the leadership of a unified profession if their actions are to be constructive (1980, p. 91).

Employers and Consumers

In the '70s, taxpayers and school systems alike expressed dissatisfaction with education and teaching. At times, the mass media magnified the problems by reporting criticisms of schools to the exclusion of effective programs.

Despite the criticism, a national public opinion poll commissioned in 1981 by ABC News (American Broadcasting Company) and the Washington (D.C.) Post showed that 70 percent of the respondents supported the schools and the job they do. The poll also showed overwhelming support for including physical education in school curricula: Ninety-two percent agreed that physical education is worthwhile ("Schools Win Good Marks" 1981).

However, inflation and declining public school enrollments make it increasingly difficult for school systems to continue sound educational programs. Sliding enrollments bring about decline in financial assistance from state governments. In addition, fewer youngsters mean less need for teachers. In response, administrators often combine small classes, leaving the frustrated physical education teacher with large groups in small, indoor spaces. Such situations can become little more than recreational play periods, with the teacher a mere supervisor. Eventually, administrators, parents, and even other teachers question the worth of such programs.

Over a seven-year period (1970-77), Dembowske, Gay, and Owings (1979) surveyed 96 school districts that varied in size and rate of enrollment change to ascertain the effect of change in enrollment upon educational programs. The researchers found that as overall enrollment declined, school districts reduced the number of electives in favor of concentrating on "basics." Reductions in electives can affect physical education in states and school districts in which physical education is elective rather than required.

> The national survey of physical education state requirements was conducted in 1981. Of the 46 respondents, 35 required physical education at the elementary level, 38 at the junior high school level, and 40 at the secondary level. In three of the 40 states requiring secondary physical education, it was required only at the ninth and tenth grades. The time devoted to physical education varied greatly, but only two states--Illinois and Alabama--specifically required daily instruction for grades K-12 . . . . Two other states, Louisiana and Maine, required time allocations similar to a daily requirement . . . . Eleven states allowed local districts to determine the amount of time to be spent in physical education. In other states, local districts were allowed to determine the time devoted to physical education in

accordance with broad state guidelines. Less than one half of the states required specific program content. (Physical Education Mandate 1982, pp. 7-8)

In 1978, AAHPER state and district president-elects revealed that, although some programs had been reduced because of tightening budgets and declining enrollments, physical education advanced in new sports programs for girls, improved teaching methods, and commitment to elementary physical education ("Public Affairs/Legislative Committee" 1978, p. 2).

The following year, AAHPERD's public affairs unit surveyed a leadership group of 500 members ("Public Affairs Unit Surveys" 1979, p. 3) with encouraging results: State directors of physical education revealed that state requirements had not changed and that programs had grown in 115 school systems. Although most respondents attributed some erosion of programs to budgetary constraints, many reported gains in program quality, changes in emphasis, and increased use of specialists in elementary physical education.

Despite declining enrollments, falling tax revenues, spiraling costs, and a shrinking job market, the physical education profession appears to be holding its own. In his keynote address at a professional preparation conference, Razor voiced optimism about the future: "We, the profession, control our future; we can determine our direction and growth. Our challenge in physical education lies not in capacity, for we have that, but rather in our unselfish commitment and application" (1977, p. 7).

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PROFESSIONAL PREPARATION CURRICULUM

The components of teacher preparation programs leading to certification in subject areas have been specified by state laws. Although certification requirements vary significantly between states, all teacher certifications require completion of courses or experiences in three basic areas: general education, professional education, and teaching specialization (Davis 1973). At the nearly 1,400 sites for teacher education in the United States, the components of these three areas vary little (Ryan 1975, p. 55).

Customarily, teacher education programs provide approximately two years of general education followed by two years of professional education and academic preparation in the teaching speciality. Thus, in two years, prospective teachers must become subject specialists and professional pedagogues. Howsam (1981, p. 144) contended that teachers receive the least preparation (in terms of hours of instruction) of any established profession.

In traditional P.E.T.E. programs, required courses fall into three categories: (1) sciences; (2) administration, methods, and tests and measurement; and (3) physical activities. In many states, certification standards specify in general terms the basic program content for teaching specialities; departments then must build their programs around these specifications. In other states, content remains the sole responsibility of individual faculties within departments of physical education.

The 1973 AAHPER Professional Preparation Conference in New Orleans and the subsequent conference report have served as guides for curriculum planning in many P.E.T.E. programs (AAHPER 1974). The conference focused on a competency-based approach to teacher preparation. Standards, concepts, competencies, and types of experiences were defined to give direction to evaluation and to improvement of physical education curricula.

This conference and the subsequent model for teacher preparation in physical education evolved from a conceptual approach to the discipline of human movement, thus helping to alleviate a concern expressed by Morford:

> Our so-called professional preparation programs deal almost entirely with an educational focus on the profession without due consideration to the subject matter content . . . . The training has primarily centered upon the mastery of techniques for teaching others how to become skilled. However, the mastery of skill, no matter how highly praised, is not an education. One must have some body of knowledge--some kind of conceptual framework. (1972, p. 92)

Rather than suggest course or credit requirements, the AAHPER model identified broad concepts and parallel competencies in the following areas: (1) discipline of human movement (sociocultural, philosophical, and historical), (2) sciences (physical, biological, and behavioral), (3) growth

and development, (4) research foundations, and (5) activities. The model also included the following pedagogical aspects of teacher preparation in physical education: (1) ways to facilitate learning, (2) curriculum planning and organization, (3) administration, and (4) intramurals. Finally, the model set standards for the evaluation of professional preparation programs.

Subject discipline and professional training. As noted, certification standards dictate content and a minimum number of hours for the professional education component of teacher education programs. In most states this component requires the fewest number of hours, especially if credit hours of student teaching are included in the 15- to 30-credit-hour range. In recent years, agencies governing teacher education programs have upgraded the professional education component to make it more responsive to society's changing needs. In some states, adjustments have taken the form of a specific course requirement with credit hours specified, or experiences or competencies to be absorbed into existing courses or programs.

The responsibility for the professional education component has rested primarily with schools, colleges, or departments of education. Recently, public school teachers involved in student teaching supervision and preservice clinical experiences have been welcomed as colleagues in professional teacher training. In most institutions, physical education faculty who are directly related to the pedagogical courses within the major area of study are recognized as contributing to the professional training of teachers.

Where the program approval system for certification is in effect, most teacher certification standards designate the school, college, or department of education as the body responsible for the general training function and the entitlement of teacher education graduates to certification. Relations among the faculties responsible for professional training are loose, sometimes even antagonistic. The school, college, or department of education delegated by the state as the authority holds direct responsibility for only about 20 percent of the instruction involved in teacher preparation. In contrast, other colleges that are engaged in the general education of all teachers provide about 33 to 50 percent of instruction within a total preparation program. The major area of study--the discipline or the teaching speciality component--comprises approximately 40 percent of the program of instruction for teacher preparation (Haberman and Stinnett 1973, pp. 85-9). The relative proportion of time spent in the several components of P.E.T.E. has changed little over the past decade.

Departments of physical education have played a greater role in the professional training of their majors than have liberal arts and science departments. Historically, physical education has been synonymous with teacher education and has devoted a substantial part of its major program requirements to professional training for teaching. Programs in the arts and sciences, sometimes reluctantly, require only one methods course in their teacher education major programs.

Throughout the '60s and '70s, in an effort to improve professional training for physical educators, experts tried to identify the discipline that underlies the study of physical education. In 1964, Henry was among the first to write about the concept of a discipline of physical education. In 1978, he reiterated that idea, stating that physical education consisted of "such diverse fields as anatomy, physics and physiology, cultural anthropology, history and sociology, as well as psychology" (1978, p. 14).

O'Hanlon and Wandzilak (1980, p. 52) stated that the movement to develop a discipline of physical education seeks to provide: (1) clarity of purpose

and conceptual structure for the field, (2) an improved research base for physical education theory, (3) a means for verifying practices in the field, and (4) a base to generate new knowledge. Yet, Zeigler (1977) and Locke (1977) agreed that the effort to develop a discipline had created a confrontation, even a schism between the "profession" camp and the "discipline" camp.

O'Hanlon and Wandzilak (1980), Ross (1979), and Siedentop (1972) each described a disciplinary approach for physical education that identifies and develops "subdisciplines" such as exercise physiology, sport psychology, motor learning, and biomechanics. This approach is intended to show connections between physical education and recognized academic disciplines.

The second major emphasis in identifying a physical education discipline has focused on the human-movement concept. Brown was among the first scholars to present a model for the "discipline of human movement" as related to the study of physical education. She defined the discipline as "the study of movement interactions between man and his environment" (1967, p. 53). This emphasis on a discipline has had significant influence on AAHPER's curricular efforts. A theoretical structure project in the 1960s culminated in the publication of Tones of Theory in 1972 (Ulrich and Nixon 1972). Five years later, AAHPER's Curriculum Design: Purposes and Processes in Physical Education Teaching-Learning (Jewett and Mullan 1977) was another step toward identifying curricular content for the field of physical education:

> The purposes of the monograph are to relate proposed curriculum theory to the more comprehensive theories underlying the entire discipline of human movement phenomena; to elaborate a particular conceptual framework for physical education curricular decision-making; and to encourage physical education teachers and curriculum specialists to utilize conceptual approaches in designing local curricula. (1977, p. vii)

A 1980 National Professional Preparation Conference in Physical Education strove to provide a forum for sharing issues and approaches to undergraduate professional preparation (Lawson 1981). Four different models were discussed: (1) Engberg, Harrington, and Cady presented an example of a competency-based approach using the discipline of human movement; (2) Siedentop, Locke, and Mand described what they called a subject-matter approach in which the discipline is defined as activity-centered rather than concept-centered; (3) Husman, Kelley, and Clarke presented one of the newer models, a nonprofessional approach based upon the generation and dissemination of knowledge about sport and physical activity apart from teacher education; and (4) Morford, Lawson, and Hutton presented a cross-disciplinary model that included a variety of career options including teacher education. This approach drew upon academic disciplines and subdisciplines as the foundation of preparation (Lawson 1981).

Although approximately 40 percent of the teacher education program is spent in the teaching speciality (subject content), authorities are concerned whether this amount of time is enough to develop an effective teacher. Eight years ago, Shulman wrote, "No amount of general intellectual skill or mastery over cognitive strategies will overcome lack in content knowledge" (1974, p. 325). Reinforcing Shulman's point, Buchmann (1981) pointed out that many philosophical, analytical papers about teacher education agree that more attention needs to be given to the matter of subject content. After all, unless teachers know their subjects, teaching skills are useless.

> All activities of teaching point beyond themselves to some content to be taught. What is actually taught by a teacher is drawn, ideally, from a larger universe of what could and should be taught. Teaching competencies are yielded by content knowledge. (1981, p. 7)

Generalist and specialist. In the 1960s, the issue of generalization versus specialization within P.E.T.E. came to bear upon activity skills courses. At that time the profession was concerned with whether a range of competencies, such as individual, dual, and team sports skills, rhythm and dance skills, and aquatics, should be required of all physical education majors preparing to teach, or if students should specialize in one area. Snyder and Scott (1954, p. 78) advocated that undergraduate teacher preparation programs should provide broad skills rather than narrow, specialized ones. A variety of activity skills are necessary, they argued, because students are not likely to materially increase their repertoire of skills beyond those mastered by the end of the undergraduate program. Although this statement may have been true during the '60s and early '70s, the teacher surplus and the increase in variety of leisure and fitness activities has changed the situation. To be contemporary, it is necessary for today's teacher to learn continuously and be able to teach new activities that have become popular as leisure pursuits.

Piscopo (1975, p. 39) supported the idea of introducing specialization within a curriculum based on generalization. He believed that physical activity course requirements should be broad and flexible, and advocated the use of proficiency examinations and electives within activity categories. Specialization may begin by allowing students to select options from specific categories such as aquatics, team sports, individual sports, coaching, and elementary, middle school, or high school teaching.

In a recent article, Lawson and Pugh (1981, pp. 59-61) asked: (1) Should major students be required to possess actual performance skills? If so, how many, when, and why? (2) Why breadth and exposure to many activities as opposed to depth in one or two? The argument for breadth rests upon the breadth of activities offered in high schools. Why should majors have to repeat performance courses in the same activities they had in high school? (3) Should performance standards remain as prerequisites for entry into the major? Why are performance requirements structured into major programs? Is performance a curricular necessity? (4) Can performance be pursued apart from application as is done in departments of performing arts? (5) What are the relationships between performance courses and professional education and disciplinary study? Lawson and Pugh stated that a measure of performance competence seems to be necessary as a bridge for performance analysis that is part of the disciplinary area.

Annarino (1979, p. 18) stated that the profession scorns the generalist concept, that it has become a profession of specialists. Specialists contend that specialized content constitutes a large portion of a student's study of physical education. For example, Henschen (1974, p. 65) described an undergraduate program at the University of Utah that required only 15 out of 48 credit hours in core courses; beyond the 15 hours students selected two tracks from among 12 areas of specialization, each of which had separate course and credit requirements.

McLaughlin (1977, p. 113), director of Health and Physical Education in the Milwaukee (Wisconsin) public schools, advocated that major students

interested in teaching at the secondary level be both generalists and specialists. The identification of a speciality, he said, makes the prospective teacher more attractive to employers.

Some specializations--coaching; elementary, secondary, and adapted physical education; athletic training; dance; aquatics; and exercise leadership--may culminate in special certification either by a state governing agency or a professional organization. In addition, certain sports organizations provide special certification for those who meet skill and knowledge standards.

Competency-based Teacher Education

The overwhelming amount of literature relative to competency-based teacher education (C.B.T.E.) written just in the last decade makes it possible, within the constraints of this document, to detail only certain aspects of the movement and its effect upon P.E.T.E. programs.

Few realize that the C.B.T.E. movement in physical education began in 1948 at the Jackson's Mill Conference in Weston, West Virginia. Sponsored by the Athletic Institute, the underlying philosophy of this National Conference on Undergraduate Professional Preparation in Health Education, Physical Education, and Recreation contained many elements of C.B.T.E. as it is known today (Grace 1975, p. 8). The major concerns of that conference were not realized, and, at a 1962 AAHPER conference on Professional Preparation in Health Education, Physical Education, and Recreation Education, they were replaced by a "course-laden and certification-accreditation oriented approach to professional preparation" (p. 9). Many believed that this change in emphasis was influenced by the burgeoning National Council for Accreditation of Teacher Education (NCATE). It was not until January 1973 in New Orleans at another national AAHPER conference on professional preparation that C.B.T.E. again became a major focus for P.E.T.E.; the report from that conference has served as a guide to curricular construction using competencies and experiences (p. 10). The most recent national professional preparation conference, held in 1980 in Chicago, focused upon diversity in physical education programs. C.B.T.E. was one of four approaches to undergraduate education presented there (Engberg 1981).

Many C.B.T.E. programs described in the literature as competency-based lack some components commonly associated with C.B.T.E. Joyce stated that "the language of behaviorism is relatively common, but the operation of programs generally indicates that a full-blown use of the competency orientation is very rare." He concluded that "since C.B.T.E. is a systems approach . . . its partial implementation indicates that it has been embraced superficially but not actualized" (1977, p. 180). Maxwell suggested that C.B.T.E. proponents "describe such programs in great detail while simultaneously admitting that no institution has a P.B.T.E. (performance-based teacher education) program that can accurately be labeled as such" (1974, p. 309).

The 1971 AACTE Committee on Performance-Based Teacher Education agreed upon the essential elements of a performance- or competency-based program:

> In performance-based programs performance goals are specified and agreed to in rigorous detail in advance of instruction. The student preparing to become a teacher must either be able to demonstrate his ability to promote desirable learning or exhibit behaviors known to promote it. He is held accountable not for passing grades, but for

attaining a given level of competence in performing the essential tasks of teaching; the training institution is itself held accountable for producing able teachers. The emphasis is on demonstrated product or output.* (Elam 1972, p. 14)

C.B.T.E. uses a systems approach with "emphasis on exit, not on entrance requirements"; with modular instruction that "increases possibilities for self-pacing, individualization, personalization, independent study, and alternative means of instruction"; and with specific objectives that the student must perform to complete the preparation program. Field work with students also is emphasized (p. 16). Descriptions of selected programs that include clinical experiences in the public schools appear in chapter five.

Physical educators have engaged in considerable debate over the merits of C.B.T.E. (Barrette 1980; Dodds 1980; Freeman 1977; Berliner 1976; Schurr 1975; Thibadeau 1975; Locke 1974). Salient arguments that favor C.B.T.E. include: the demand upon physical education to produce conceptual models based on new information and synthesis; the emergence of descriptive analytic research; the integration of theory into practice; increased efforts by professional associations to elicit kinds of information and research intended to bridge the gap between theory and practice (Barrette 1980, pp. 298-9). Works by Jewett and Mullan (1972), Siedentop (1972), and Feingold (1972) indicate, as Barrette wrote, "professional concern for conceptualizing both the role of the teacher and the nature and process of professional preparation programs" (1975, p. 30).

Arguments cited frequently against C.B.T.E. include both the inability to identify and reliably assess teaching competencies (Locke 1974; Freeman 1977) and the lack of a research base for the model, particularly regarding the behavioral relationship between teacher and student (Darst 1980; Berliner 1976; Dodds 1980). Brophy reported six years ago that "research on teaching literally is in its infancy, and little data-based advice is available to teachers" (1976, p. 33).

Yet, several C.B.T.E. programs in physical education appear to flourish. One program deemed successful by those involved is at the University of North Florida, Jacksonville (Tabor 1980). Although other programs have been successful, the unique beginning of North Florida's program merits the brief description that follows. The entire North Florida College of Education adopted C.B.T.E. when the college opened in 1972 and employed faculty with the understanding that they would work with the system. It was believed that total faculty acceptance of C.B.T.E. would eliminate divisiveness; the faculty cooperated toward a goal defined at the outset by the faculty (p. 312).

Since the inception of C.B.T.E., a flurry of efforts has been directed toward overcoming problems and obstacles encountered in C.B.T.E. Educators are attempting to identify physical education teaching competencies; they have designed a multitude of recording instruments, analysis systems, and research tools to assess physical education teaching effectiveness (instruments and analysis systems are identified in chapter five). Physical education scholars, practitioners, and researchers are engaged in a concerted effort to determine the role of C.B.T.E. in the preparation of physical education teachers.

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*For a description of the essential elements of a C.B.T.E. program, see: Elam, Stanley. Performance Based Teacher Education: What is the State of the Art? Washington, D.C.: American Association of Colleges for Teacher

Related/Allied Fields

The fields of health, recreation, dance, and athletics (sport, coaching) began to diverge from physical education shortly after World War II. Although the professional preparation programs of these allied fields are distinct from professional preparation in physical education, and although the roles they assume in society are distinct in the minds of educators, much of the public still perceives them as interchangeable. The allied fields, which at one time were part of physical education, now have separate professional associations and administrative structures in institutions of higher learning. Except for athletics, each identifies its specific discipline, curriculum, and certification. This kind of refinement within the allied fields contributes to their separateness from physical education. Still, the fields remain related; students majoring in one allied field often minor in another.

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PROFESSIONAL PREPARATION AND ROLE CLARIFICATION

The familiar role of the teacher funneling knowledge into the learner is a thing of the past. Today, a teacher is expected to be not only a repository of knowledge, but also a contributor to the creation and interpretation of knowledge, a designer of content goals, a facilitator of learning through understanding human behavior, and an adept interpreter of societal needs and trends. What follows is a discussion of selected roles of the teacher.

Behavioral Technician

The role of the teacher has changed dramatically from that of imparting knowledge to that of facilitating learning. Rather than simply representing a repository of knowledge, the teacher is viewed as a repository of strategies for assessing the needs of individual learners, designing and carrying out instruction, and evaluating the changes in learners. As such, the teacher is a behavioral technician--one who clarifies the desired behaviors of each learner and applies appropriate measures to elicit those behaviors (Singer and Dick 1974). However, choosing appropriate measures calls for skills beyond those typically associated with technicians; teachers must be specialists in human behavior.

Physical educators need a thorough understanding of human development, social dynamics, psychology of learning, and the intricacies of the affective domain (Martin 1973, p. 32). They must understand the processes of assessing, diagnosing, prescribing, and manipulating behavior, because these skills are essential to the teacher's capacity to design content goals that can be translated into measurable student behaviors (Eagleton 1981, p. 50). In addition, they must plan steps toward content goals and evaluate results (Miel 1981, p. 104).

The teacher as behavioral technician also instills in learners a sense of personal responsibility for modifying their behavior (Eagleton 1981, p. 50), thus helping students become independent of teachers.

Educator of the Body of Knowledge

The disciplinary aspect of physical education has long been viewed as an important element in the curricula of those preparing to teach; however, it was not understood that this knowledge was, in turn, to be passed on to students. This practice was reinforced by the procedure of licensing teachers on the basis of a cumulation of knowledge as reflected by successful course completion rather than on the demonstration of ability to disseminate this knowledge (U.S. Office of Education 1972, p. 65). Consequently, physical

education curricula in public schools tend not to reflect the body of knowledge. No wonder the role of physical education in public school curricula is continually challenged.

Ever since Henry's proclamation in 1964 that physical education could be an academic discipline (Lawson 1981, p. 9), professional leaders have sought support for the idea that physical education has an organized body of knowledge which is conceptual, theoretical, and scholarly (p. 89).

One of the most tangible efforts of the profession to set down the body of knowledge of physical education was the publication, Knowledge and Understanding in Physical Education, prepared under the leadership of Larson (AAHPER 1969). This publication attempts to serve the physical educator's need for a clear statement of the concepts and facts underlying the discipline of physical education. It is designed as a resource to help teachers help learners develop their potential by providing not just skills but also answers to the questions "how" and "why." This book embraces the notion that intellectual objectives undergird all other objectives.

A little over 10 years after publication of Larson's work, AAHPERD embarked on another major effort to further clarify and promote the teaching of the body of knowledge. This collection of nine booklets, Basic Stuff in Physical Education, Series I, II, written under the leadership of Kneer for undergraduate physical education majors and practitioners in the field (AAHPERD 1981), presents concepts, principles, and instructional activities extracted from the body of knowledge of physical education. The specialized nature of research tends to make it difficult for the nonresearch-oriented teacher to apply research findings to day-to-day teaching; the Basic Stuff series seeks to narrow the gap between research and practice.

What must follow is a departure from the traditional approach to the preparation of physical education teachers, toward the development of skills for teaching the body of knowledge. Those skills must be sufficiently sophisticated and flexible to allow creation and processing of new knowledge.

Curricular Designer

The professoriate plays the role of designer in curricular development; therefore, every teacher must be a curricular scholar. According to Palmatier, "a designer must take charge of conceptualizing and drawing up specifications for the end product . . . to ensure that the parts fit together" (1977, pp. 7-8).

A curriculum depends on systematic planning and evaluation, for one plans on the basis of evaluation and evaluates on the basis of plans. This symbiotic relationship is important to remember (AAHPER 1974, p. 50). In this context, evaluation becomes a continual process, which should be conducted by evaluators apart from designers. The teacher needs skills in planning and evaluating, and in developing evaluative instruments.

In designing curricula, the teacher must respond to tradition, identify with the present, but cast into the future. This is essential if the consumers--children--are to function effectively in the 21st century. Moreover, the teacher must design not only content, but strategies for teaching and learning.

According to Melograno (1978, pp. 27-28), physical education teachers traditionally have played a consumer role in curricular design. They have accepted the goals of others, thus reinforcing the status quo. They leave reform and innovation to others. Physical educators must move to the other

end of the continuum in order to develop a dynamic curriculum.

> Educators in designing curricula must decide what consideration to give to the future, what basics to provide for, and how to ensure a balanced, fair curriculum for each person being educated . . . while at the same time looking after society's interests. They must deal with such problems . . . as the psychological climate in schools with diverse populations . . . demographic shifts, media impact as a force to be considered in planning curricula, and uses of technology in the school. (Miel 1981, pp. 104-105)

Trend Analyst

Conventional schooling cannot cope with the accelerated rate of societal change. According to the National Commission on Teacher Education and Professional Standards, teachers "have been getting better at preparing children for a world which no longer exists" (Denemark 1969, p. 37). More than 10 years later, students still are provided with "maintenance learning" that holds little value for the future. If educators fail to keep up with social change, they must share the blame for education's obsolescence with those responsible for such trends as the back-to-basics movement and standardized curricula, which bind education to the past (Miel 1981, p. 129).

To analyze and act on social trends, the physical educator needs a repertoire of basic skills in conducting and analyzing demographic research, recognizing changing conditions, and forecasting change. Clark (1977, p. 6) urged educators to approach the future aggressively. However, he cautioned against trusting in predictions more than analysis of the past justifies.

Researcher and Research Consumer

The field of education needs research, which is the basic mechanism for systematically questioning that that passes for knowledge. Teachers are both consumers and creators of research. They must be able to comprehend, interpret, and use existing knowledge, as well as generate new knowledge.

The relationship that ought to exist between research and teacher education seems clear: Medley described the connection as

> not what research can do for teacher education, but what teacher education can do for research . . . . Teacher education should not look to research in teaching for help in training teachers; on the contrary, research must look to teacher education for help in developing a science of teacher behavior as a by-product of the process of teacher education. (1969, p. 132)

According to Darst (1979, pp. 7-8), the area most in need of research is the search for correlations between teacher behavior and learner behavior.

Research is not limited to quantitative studies. One engages in research when designing or redesigning a curriculum, modifying learner behavior, testing a learning theory, designing programmed instruction, and so on. To both conduct and use research, the physical educator needs basic skills in the scientific methods of developing and testing hypotheses, processing

information, and working with statistics. Because computers facilitate both primary and secondary research, instruction in computer technology is becoming more important, even if the instruction does no more than acquaint the teacher candidate with the potential of this tool.

As in any profession, the overall stature of the pedagogical profession is judged by its empirical body of knowledge, which reflects the scientific capability of its members. Only when all members contribute to the research effort will the profession enjoy the stature it deserves.

Zeigler (1979, p. 17) believes that preparing scholar-researchers in the field of physical education is the major avenue for change. While he generally sees this done at the university level, he agrees with the notion that all professionals should be researchers of sorts.

The preparation of teachers to assume contemporary roles, such as those described above, calls for reform in the design of professional preparation programs. Such programs must provide multiple opportunities to experience the teaching-learning process and be driven by ongoing evaluation and research. The following chapters suggest some strategies that have begun to permeate professional preparation programs.

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STRATEGIES FOR P.E.T.E. AND NEEDS FOR RESEARCH

> The education of teachers has become one of the most hotly debated topics of the 1970s. Tight money, new calls for educational accountability, poor academic performance of students on standardized tests, a plethora of social problems in the schools, and a growing dissatisfaction among students contribute to a concern with improving the quality of the training that a prospective teacher receives. (Siedentop 1976, p. vii)

The American public's cry for educational reform that resounded in the 1960s (Fantini 1973) significantly influenced teacher education in the 1970s. Teacher educators were forced to examine traditional preparation programs in light of the demand for educational accountability. Their reviews revealed a shallow theoretical base and a lack of specifically stated objectives, both of which made program evaluation difficult. These and other weaknesses also made it difficult for a teacher education program to be accountable for its products (Grace 1975, p. 2). This dilemma led to the emergence of a competency-based, field-centered approach to the training of prospective teachers. Meanwhile, state departments of education encouraged, and in many states required, that prospective teachers be evaluated on their performance with children in school settings.

Teacher educators responded with programs that provide more extensive and better field experiences in schools and other institutions before student teaching. Recognizing the need for clinical training before students become practitioners, many program designers are providing for sequential, systematic simulation experiences that include analysis of teaching performance. In addition, teacher researchers are engaged in establishing a research base for teacher education for purposes of assessing competence in teaching.

Analysis Systems

In an effort to make the study of teaching more reliable, more than 100 instruments have been developed for systematically recording classroom activities of teachers and pupils (Darst 1977, p. 74). Initially, physical educators also employed these observational systems. The Flanders Interaction Analysis System (FIAS) (1967) was perhaps the best known and the most frequently used system for analyzing teaching behavior, but it and other systems developed in the '60s proved inappropriate for analyzing teaching performance in settings where movement was the medium for learning.

In the last decade physical educators primarily revised and adapted the FIAS. The Keough-Henderson System for Analyzing Teacher Behavior (1973) observed verbal and nonverbal teaching behaviors as they occur within the

structure of a lesson. Cheffers, Amidon, and Rodgers (1974) combined verbal and nonverbal interaction in the physical education setting. Goldberger (1974) and Kraft (1975) applied the concept of interaction analysis to supervisory-teacher interaction while supervising student teachers. Rankin (1978) devised an interaction tool to use in the observation of verbal and nonverbal interaction in the gymnasium.

The development and use of descriptive-analytic instruments began in the latter part of the '70s. Daryl Siedentop, considered by many physical educators to be among the foremost authorities on physical education teaching, provided the impetus for many of the descriptive-analytic systems currently in use (see Siedentop 1976). Siedentop and Hughley (1975) developed the Ohio State University Teacher Behavior Rating Scale to observe and classify teaching behaviors as they occurred in live settings. The TRI-LAP (Teacher's Role in the Learning Activity Process) system, developed by Hurwitz (1975), focused on the verbal feedback physical educators give students when selecting content and conducting classes. Fishman (1975) developed a system for analyzing augmented feedback, which Tobey (1975) used in a slightly revised version. Quarterman (1980) identified verbal and nonverbal behavior categories that represent the operant reinforcement theory in which the immediate consequences of behavior shape future behavior. Metzler (1981) described a multiple observational system called MOST-PE that employs event, duration, "placheck" (Planned Activity Check) recordings, and rating scales and can also include anecdotal events. Although use of Metzler's system has been confined to student teaching settings, the MOST-PE system (Multiple Observation of Student Teachers in Physical Education) and some of the other systems are appropriate for use in simulation and pre-student-teaching clinical experiences.

Some of these recording instruments are too complex and sophisticated to be used in live settings. Many are more applicable for analyzing teaching behavior from videotaped lessons. For practical research in classrooms, Lewis (1977) designed the Student Behavior Analysis System (SBAS). Although its focus is on the behavior of elementary and secondary students, the data also provide objective feedback on the behavior of teachers and student teachers with respect to class management.

Recognizing the need for observation instruments to reflect the emphases of individual programs, Rife (1979) identified some guidelines for developing instruments. He recommended defining the categories to be observed, ascertaining the purposes for the information, selecting compatible recording techniques, using more than one trained observer, conducting periodic reliability checks, and illustrating collected data on conventional graphs for ease of understanding.

The value of a data-based, systematic approach in researching and improving instruction cannot be ignored. Although most assessment instruments have had limited reliability and validity, many educators endorse the value of systematically collecting and analyzing physical education data. We believe that, regardless of one's philosophy, the quest for methods and programs that will improve education in public schools must be unending. Two methods of teacher preparation that systematic investigation has reinforced are simulation and field experience.

Simulation

Teaching is both art and science, and certain innate, immeasurable traits in every teacher contribute to what becomes that individual's style of teaching. Phrases such as "teachers are born, not made" possess an element of truth. Underlying the science of teaching is the assumption that it is "amenable to systematic evaluation and capable of being broken down into a series of tasks that can be mastered" (Siedentop 1976, p. 3). Teacher educators design simulations on the premise that teaching skills improve with practice. Simulation experiences allow students to practice the skills of teaching on a smaller scale than is found in public school settings. When used with other learning experiences, simulation provides the student with the skills necessary for success in school settings.

"Simulations are based on models. The model is simplified but is an accurate representation of some aspect of the real world," Johnson (1978, p. 61) wrote. He cited the following characteristics common to simulations:

1. realistic setting
2. sequential set of interdependent decisions
3. users required to make decisions
4. decisions cannot be retracted
5. simulation accommodates a multitude of problem-solving approaches
6. situation evolves as a result of decisions made by users
7. evaluation dependent upon previous decisions of users.

Johnson (pp. 62-4) described several examples of simulation training environments: (1) Via role playing, the teacher candidate obtains socially relevant experiences by acting out assigned roles in problematic situations. (2) Via instructional media, candidates view situations that require decisions, then experience the situations that develop from those decisions. (3) Via peer teaching, candidates gain experience in teaching others. Peer teaching offers a safe environment where new behaviors may be practiced, but some professionals question the transferability of the experience.

One widely used simulation experience is microteaching. Begun in 1962 at Stanford University, the original concept required a candidate to teach a short, specific lesson to a small group while being videotaped, then to watch the playback while an instructor provided evaluative comments. Because of problems with equipment, many microteaching programs now omit the videotaping.

Simulation experiences in physical education generally focus on isolated categories of teaching tasks, e.g., management skills, transmission of subject matter, or feedback (Keough and Henderson 1973). Each category of tasks is studied, applied in a simulated experience, and evaluated. Whether simulation experiences make a difference depends on the designer's ability to categorize teaching tasks appropriately; provide a carefully prepared, well-focused setting for practice; and apply an assessment instrument that measures the prescribed tasks. It is considered essential that the class setting include sufficient space for learners to respond through movement (Keough and Henderson 1973).

The value of videotaping simulated experiences cannot be overstated. The Chinese proverb, "One picture is worth more than ten thousand words," applies to the practice of teaching skills. Many students improve their skills after viewing themselves in a microteaching experience. However, for the process to be most effective, it should include analysis by both the student and a master teacher (Keough and Henderson 1973). Does microteaching make a difference?

Johnson (1978, p. 66) responded with a qualified "yes," but argued that experience with school children may have the same effect. He noted that "good simulations help students understand professional concepts and relationships, just as problem sets help crystallize our understanding of science" (p. 62).

Field-Based Experiences

> Field-based preservice teacher education is an optimal mix of early and continuous developmental experiences that occur in realistic educational settings with children. They are cooperatively planned for preservice teachers and evaluated by teachers, administrators, parents, professional educators and scholars from the discipline. (Andersen 1976, p. 1)

Contacts with children and youths through observation, participation, and teaching contribute to the teacher candidate's understanding of learning (Keough and Henderson 1977, p. 1). Andersen (1976, pp. 1-6) outlined a series of steps for planning a field-based program: (1) identify the rationale; (2) design a program sequence; (3) identify and select a variety of learning experiences; (4) design field experiences; (5) identify sites and participating field agents; (6) try, evaluate; (7) provide participant payoff; and (8) protect your faculty. He emphasized that it is essential for school and university personnel to cooperate, communicate, and maintain an atmosphere of openness as the field-based program develops.

During the '70s a number of professionals stressed the need for beginning field experiences before the senior year. Dougherty (1973, pp. 57-8) recommended that P.E.T.E. programs include a series of field experiences, because many students did not discover until student teaching in the senior year that they were unsuited for teaching. Some institutions have offered early field experiences in P.E.T.E. for years. Many professional educators as well as state departments of education have recognized the need for early field experiences, and the trend today is toward their provision, perhaps as early as the freshman year. Some states will not accredit an institutional program unless there is evidence of clinical experiences in school settings throughout the period of preparation (Bentz 1978, p. 33).

Dougherty (1973, p. 5) advocated that field experiences reinforce and supplement college curricula. Mancuso also recommended that "course work should complement and parallel public schools as they are as well as what they can become" (1978, p. 38).

The trend toward early field experiences presents a dilemma for both schools and universities. Schools are inundated with prospective teachers, some of whom may not be prepared to cope with children and youths. Palmatier and others agree that "it is vital to ensure that students are ready to practice and apply knowledge before placing them in a field situation" (1977, p. 11). He suggested that an essential ingredient to the success of field programs is a partnership between colleges and public schools.

Postsecondary physical educators as well as K-12 school personnel are raising a number of questions, some of which may prove unanswerable: What are the roles and the responsibilities of schools in training prospective teachers? How can institutions with large enrollments of teacher education students find enough good field sites and cooperating teachers? This question is particularly applicable to special subjects such as physical education. How can schools, inundated with student teachers, respond to the needs of

student teachers while ensuring that children receive the best education possible? How do administrators answer parents who worry that their children are treated like guinea pigs and that teachers working with student teachers are not earning their salaries? To what extent can and should postsecondary educators attempt to improve the quality of physical education programs in the schools? To what extent should they control the field experience for preservice students? Should physical education majors be placed in elementary settings taught and supervised by classroom teachers? Who should evaluate the experience? How and by whom should school teachers be reimbursed for their cooperation? How can universities provide sufficient time and reward for the coordination and supervision of field experiences? The literature addresses many of these questions but reaches few conclusions.

The literature describes a wealth of information about field-based physical education programs from early experiences through student teaching. Articles detail entrance into field experiences, placement procedures, and the nature and use of assessment tools for these experiences. Entire issues of professional journals and numerous special conferences have been devoted to the topic. Some examples of field-based experiences described by Dougherty (1973), Keough and Henderson (1977), Howey (1978), and Webb (1981) follow:

1. Orientation; interviews with public school personnel; visitation to schools and classes at the elementary and secondary levels.
2. Guided observation of physical education classes.
3. Assisting the teacher responsible for the class.
4. Teaching individuals and/or small groups of children.
5. Teaching parts of lessons.
6. Planning for and teaching a full lesson to an entire class.
7. Assignment to a specific class for a set time with responsibility for planning, teaching, and evaluating a series of lessons.
8. Use of videotaping to analyze lessons or parts of lessons taught.
9. In student teaching, being assigned to plan, teach, and evaluate several classes, and, in many cases, assuming some coaching responsibilities.

There is considerable variance in the amount of time preservice students spend in the schools, particularly before student-teaching experiences.*

Trends indicate that carefully planned, well-focused, sequential experiences in preservice field-based P.E.T.E. will continue to increase. As Denemark and Nelli wrote, "The interlacing of real experiences with more direct or didactic forms of instruction is a promising means of professional training" (1981, p. 11).

Research/Assessment

Perhaps the most obvious weakness in teacher education has been the lack of a research base to assess the competence of teachers. As the competency-based teacher education movement developed, it became apparent that

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*The authors have not intentionally slighted student teaching, which is the culminating component of preservice field-based teacher education. However, because of space limitations they focus on the newer trend of pre-student-teaching field experiences.

traditional methods of assessment were neither reliable nor valid. The literature abounds with criticisms of C.B.T.E. primarily on the basis of the premise that measurement tools are inadequate for evaluating teaching skills (Hortman 1975, p. 65). Researchers have found little relationship between teacher behavior and student achievement. According to Berliner, "the effects of teachers and the techniques of teaching on achievement are bound to be trivial" (1976, p. 5). Denemark and Nelli claimed that "research on teaching is in its infancy, and little data-based advice is available to teachers" (1981, p. 33). Locke (1974, p. 7) cited several inaccurate assumptions made by physical educators regarding C.B.T.E.:

1. Basic competencies for physical education have been specified;
2. Competency evaluation techniques are available;
3. Research literature will show which teacher competencies are causally related to student learning in the psychomotor domain; and
4. The question of how to teach physical education teachers can be resolved.

Writing from the perspective of 1990, Lanier recommended a "shift from a single measure, one-time-only assessment to multiple assessments at various stages during preservice and inservice education. This has increased both the reliability and validity of competency assessment" (1981, p. 90). Anderson (1975) initiated a Videotape Data Bank for descriptive-analytic research. Numerous observation methods, recording instruments, and descriptive-analytic systems have been reported in the literature. Kennedy and Bush (1976, p. 14) identified three methodological obstacles confronting educational research: (1) the teacher's ability to affect student growth, (2) attempting to operationalize constructs related to student outcomes, and (3) statistical problems in measuring student growth. They described techniques useful in overcoming these obstacles, showing that "methodologically respectable teacher-effects research can be conducted" (p. 17).

One of the more promising additions to the field of P.E.T.E. research is The Bulletin Board, a biannual publication started in 1980 by Daryl Siedentop. Distributed to some 350 teacher educators, The Bulletin Board reports developments in health, physical education, and recreation, and publicizes pertinent literature. The publication is free to readers; Ohio State University's School of HPER carries the expense.

It is hoped that the establishment of a P.E.T.E. research base will restrain the critics and provide answers to unresolved questions related to physical education teaching effectiveness. Resolution of these issues should lead to more reliable methods of certification and accreditation.

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CERTIFICATION AND ACCREDITATION

> The process of monitoring teacher education has two foci: the program of preparation employed by the trainer and the product of the program, the teacher. Program monitoring is labeled "accreditation" while monitoring individuals is designated "certification." (Ryan 1975, p. 64)

In the United States, two monitors primarily assume responsibility for accrediting teacher trainers and certifying trainees. Only one of the monitors--the state education agency, which is responsible for teacher certification--has a legal mandate for carrying out the certification function (p. 64). Several organizations monitor preparation programs; among these, the National Council for Accreditation of Teacher Education (NCATE), though voluntary, holds the most influence.

Certification

State education agencies in all 50 states annually certify more than 300,000 teachers. They oversee the accreditation of more than 1,400 teacher education institutions, 600 of which prepare physical education teachers. Because the mechanisms and criteria for carrying out this monumental bureaucratic task are responsibilities of state, not national agencies, requirements vary considerably from state to state (p. 65).

Despite variations, patterns of teacher certification have been identified. Eisdorfer and Tractenberg (1977, p. 111) described the following widely used categories of criteria for initial certification: (1) course completion, (2) program approval, (3) written examination, and (4) demonstrated performance. In course completion in its simplest form, the state agency designates a set of courses, receives a transcript of credit for courses completed, compares it against the specified requirements, and either certifies or cites deficiencies. Course completion left states with little control over the philosophy or content of the academic preparation of teachers. Program approval has replaced course completion as the dominant category, but the latter is still used for issuing second certificates and out-of-state certificates.

In states using program approval as criteria for certification of beginning teachers, the state education agency evaluates an institution's teacher education program as a whole for compliance with guidelines in lieu of evaluating programs for specific subjects such as P.E.T.E. In 1977, 46 states relied at least in part on the program-approval method for certifying new teachers. These states either have accepted the NCATE standards for teacher education programs or have devised their own requirements. Program approval

gives a state more control over program quality, content, and philosophy, but it shifts attention away from the competence of the applicant (p. 113).

Whether by the approved-program or the transcript-analysis route, certification has no universal standard, no common core, nor any universal model. Institutions engaged in preparing teachers are charged to develop programs that comply with the certification standards of the respective states, but it is unclear whether institutions see themselves strictly as agents of the state, or as agents of the profession as well. The profession's role in certification is one of developing standards that may influence certifying bodies and the institutions preparing teachers.

During the '70s when public pressure brought competency-based education to the forefront of elementary and secondary education, a parallel movement to assess the competence of teachers began.

> By October 1, 1980, at least 29 states had taken some kind of action related to competency assessment of teachers, some to regulate entry into preparation programs, others to regulate certification, and a few to do both. (Sandefur 1981, p. 21)

Eleven states had passed legislation to mandate competency testing of some form and nine states had developed or were studying assessment programs without mandatory legislation (p. 21). Among the nine, Georgia has had comprehensive competency-based teacher education and performance-based certification programs since July 1978 (Performance-based Certification 1979). Eisdorfer and Tractenberg stated that

> while certification may serve a number of disparate purposes, including limiting entry into an already overcrowded profession, its primary function is to assure that every public school teacher meets at least some minimum standards of personal fitness and professional competence. (1977, p. 111)

Consumers--employers (school districts), parents, and youngsters--expect that certification criteria relate directly to the knowledge and skills necessary for teaching. In adjudicating legal suits, courts will continue to ask that the criteria and standards for certification show reasonable relationship to the job the individual is to perform. In this respect, certifying bodies may be held accountable, in part, for the performance of those certified.

Accreditation

Accreditation serves to protect the public against incompetent practitioners (AAHPER 1962, p. 113). For many years the physical education profession has worked to establish accreditation standards for P.E.T.E. programs. The first attempt came in 1931 when standards for evaluating curricula, courses, admission standards for staff, and other aspects of health and physical education programs were developed.

By the early 1940s, it was clear that those national standards had not been followed. After World War II, a consortium of organizations, including AAHPER, sought to further promote the standards. The group rejected the idea of national standards against which institutions would be rated. Rather, it emphasized "desirable practices" (AAHPER 1962, p. 130).

In 1957, the National Commission on Accrediting approved NCATE as the sole national accrediting body for the entire field of teacher education (AAHPER 1962, p. 111). This action was sanctioned by the Council on Postsecondary Accreditation and recognized by the U.S. Office of Education (Brassie 1979, p. 19). At its national meeting in 1960, AAHPER resolved (1) to accept NCATE as the accrediting organization, (2) to recognize teacher education programs approved by NCATE, (3) to urge state departments of education to grant certification only to graduates of NCATE-accredited institutions, (4) to urge local school boards to employ only physical education graduates from NCATE-accredited institutions, and (5) to require that professional membership in AAHPER be contingent upon earned degrees from NCATE-accredited institutions (AAHPER 1962, p. 114).

As the link between AAHPER and NCATE was informal, physical education leaders began to recognize the need for specific accreditation of physical education programs. According to Brassie (1981, p. 75), physical education is one of the few degree programs with no outside accreditation agency monitoring standards established by the profession.

In 1977, Cooper recommended that AAHPER be encouraged to establish an independent commission to serve as an accrediting body, but no action was forthcoming from the Alliance (Cooper 1977, p. 37). However, in 1980 the National Association for Sport and Physical Education initiated plans that could lead to a program in which NASPE would accredit both graduate and undergraduate professional preparation programs (Forker and Fraleigh 1980, p. 45). The momentum of this proposal appears to have been slowed by resistance on the part of institutional personnel. During the spring 1982 national AAHPERD convention in Houston, Texas, NASPE accepted the recommended standards for accrediting graduate programs in physical education, but tabled the plan to make NASPE an accrediting agency.

Recently, NCATE expanded and AAHPERD has affiliated as an associate member of the council. AAHPERD will provide trained physical educators to serve on NCATE teams that evaluate institutions seeking accreditation.

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STRATEGIES FOR CHANGING P.E.T.E.

Many experts agree that the education establishment has been unbelievably slow in responding to change (Tafel 1981, p. 25). Horvat and Clark (1971, p. 616) suggested not only that teachers are relatively passive consumers of change but that they are actually victims of change.

Not all share the view that education is unchangeable. Palmatier (1977, p. 12) insisted that teacher education has responded to demands for change. According to Clements, however, changes in teacher education too often spring from persuasive suggestion rather than systematic planning; he wrote, "Virtually all of the innovations in teacher education have little or no reliable evidence to validate their effectiveness. Most projects are undertaken as demonstrations of their feasibility" (1969, p. 20).

Nowhere does the literature suggest that teacher education plays a leading role in affecting change, despite the generally regarded theorem that "education could be the most constructive and powerful influence for preparing society for the coming age" (Tafel 1981, p. 25). Factors that can thwart change include:

- the tendency in human nature to resist change;
- interest in recapturing past success (Miel 1981, p. 78);
- preoccupation with what is rather than what ought to be;
- dependence on traditional teaching styles (Eagleton 1981, p. 50; Pace 1980, pp. 2-3);
- the tendency to dwell on bad rather than good teaching (Sparks and Hammond 1981, p. 17);
- the tendency to stress that which hinders rather than that which fosters (Miel 1981, p. 462);
- obstacles within institutions (Sparks and Hammond 1981, p. 18), e.g., financial constraints, faculty provincialism, bureaucratic structures;
- the gap between academia and the real world;
- the lack of educators prepared as change agents, trend analysts, researchers, or futurists.

Without greater receptivity to change, Scott suggested, the "tidal wave of change (will) threaten to engulf the field of physical education" (1979, p. 105). Hellison, on the other hand, indicated that "the physical education profession (is) bending to the winds of progressive thought" (1973, pp. 74-5). Ellis (Lawson 1981, pp. 10, 12) agreed that physical education changes but warned that the rate of societal change outpaces the rate at which physical education responds.

Teacher educators must reflect the dynamic nature of teacher education in a spirit of openness to change (Lawson 1981, p. 10), keeping in mind--

- o that the foundation of all change is the science of questioning and scientific inquiry (Miel 1981, pp. 477-78; Zeigler 1979, p. 17);
- o that the capacity for change increases when a curriculum has built-in flexibility (Tafel 1981, p. 26; Wiener n.d., p. 1);
- o that diversity not only leads to progress, but also is a mark of progress (Lawson 1981, pp. 15, 81);
- o that change depends on never believing you have found the one right way (Miel 1981, p. 451).

The literature abounds with recommendations for change in physical education teacher education. In general, the recommendations fall into the categories of certification requirements, curriculum content, and process and methodology. Some representative suggestions follow.

Certification

- o Certification systems that are more general regarding course or credit requirements respond to curriculum changes better than those with definitive requirements (Midwest District-AAHPER 1977, p. 58).
- o To gain respect, physical education teacher education must become competency-based.
- o Licensing predicated solely on preservice education should give way to a system requiring inservice experience for certification (Denemark 1969, p. 37). Further, lifelong licensing should yield to a system of periodic relicensing on the basis of exhibited competence (Midwest District-AAHPER 1977, pp. 4-5).
- o The fading of regional and cultural distinctions may suggest a revitalization of universal certification standards (Miel 1981, pp. 35-6; Freeman 1977, p. 302).
- o Despite pressures for state autonomy, the profession must resist the proliferation of conflicting certification standards. However, the field could support a hierarchy of certificates that reflect varying roles, levels of competence, or entry-level job skills (Grebner 1979, p. 5). Differential staffing might be used to capitalize on varying levels of competence (Cottrell 1970, p. 16), thus helping to dispel the notion that all teachers must be equally good at all things (Denemark 1969, p. 4).

Curriculum

- o The rapid growth in physical education knowledge precludes any notion of a static curriculum. No single curriculum can provide preparation for all the roles the profession embraces. Physical education professional preparation must reflect the field's growing sophistication (Annarino 1979, pp. 18-20).
- o If educators knew and practiced the concepts of personalized learning and individualized instruction, the teacher surplus would evaporate. Educating for learners' individual needs calls for a specialized staff: diagnosticians, researchers, prescribers, master teachers, teaching assistants (Jewett 1978, p. 12; Bowers and Klesius 1970, p. 23).
- o It is not enough to know where society has been and where it is now. Physical educators must leave preparation programs able to understand

social trends and changes and increasingly complex global interdependence (Miel 1981, p. 27; Jewett 1978, pp. 5, 12; Martin 1973, p. 31).

- o P.E.T.E. programs must be subject to change on the basis of empirical, formative evaluation (Watts 1978, pp. 87-8, 90). Those designing programs must command at least basic research skills.
- o Prospective teachers must learn formative evaluation skills (Illinois Association 1978) and use these in self-assessment. If students do not make constructive self-criticism a habit during the preservice experience, they will not likely practice it as teachers.
- o Physical education needs specialists trained to work with exceptional groups including elderly, preschool, disabled, handicapped, gifted, bilingual, multicultural, and disadvantaged individuals.
- o Physical educators must relate not only to sport, but to a range of other fields, especially health-related fields (Jewett 1978, p. 3). Physical educators must relate well to personnel in other fields, and coordinate curricula with those fields.
- o The importance of computer and media technology in education will greatly expand (Miel 1981, p. 128). Physical educators must learn to use these tools to enhance learning (p. 140).
- o Teacher preparation institutions must prepare teachers in a manner that ensures effective performance. This requires defining the teacher's role, identifying knowledge and skills that relate to that role, establishing certification standards, then selecting prospective teachers who meet the standards (Annarino 1979, pp. 18-20; Watts 1978, pp. 88-90; Wiener n.d., p. 3; Jewett 1978, pp. 6-7).
- o A curriculum should bridge professional preparation and the world of work. Specifically, it should develop skills for job seeking, job keeping, and career planning. Curriculum designers should view the marketplace as a change agent in professional preparation (Midwest District-AAHPER 1977, p. 6; Jewett 1978, p. 5).

Process and Methodology

- o Because we cannot foresee choices and dilemmas that lie in the future, we must encourage innovative learning, preparing individuals to cope with situations not yet encountered (Miel 1981, p. 38).
- o Prospective teachers learn to teach by modeling their behavior after that of their instructors. Teacher education faculty, therefore, must assume responsibility for demonstrating desirable teaching behavior (Pace 1980, pp. 2, 12-13). Indeed, teacher education faculty should be selected in part on their ability to model effectively (Midwest District-AAHPER 1977, p. 5).

Profession

- o In the absence of universal curricular standards and with authority for curricular development vested at the college and university level, the profession needs model programs to serve as prototypes (Lawson 1981, p. 84).
- o Professional organizations cannot afford innovation because they must represent a diverse membership (p. 84). Nonetheless, the physical

education profession, perhaps in tandem with certification and accreditation agencies, should monitor major and minor physical education programs (Midwest District-AAHPER 1977, p. 3).

Administration

- With present teacher supply outstripping demand, it is time to establish more selective requirements for admission into and graduation from professional preparation programs (Graybeal 1981, p. 16). Attempting to educate everyone who shows interest in physical education may encourage quantity at the expense of quality.
- Institutions preparing physical educators must link preservice and inservice education, perhaps using both as conditions for licensing (Midwest District-AAHPER 1977, p. 4).
- Teacher education might be better accomplished through joint efforts by professional preparation institutions and public school personnel. Such cooperation could better bridge the gaps between theory and practice, preservice and inservice education, professional preparation and the world of work (Farquhar 1978, p. 37; Wiener n.d., p. 3).
- Given the current rate of expansion of knowledge, proliferation of specializations, and financial exigency, no institution can be all things to all students. Collaboration between professional preparation institutions could not only reduce redundancy but also allow institutions to specialize (Farquhar 1978, p. 35).
- Just as prospective teachers must make self-evaluation a habit, so administrators must establish procedures for the ongoing evaluation of P.E.T.E. programs (Watts 1978, pp. 87-8, 90).

Seabory (Tafel 1981, p. 33) warned that if we are to arrive at the year 2000, we must conceive of that world today. Yet, those who prepare physical educators design curricula for a world that no longer exists. To both reflect and affect societal change, professional preparation institutions must direct efforts toward designing curricula not for today, but for the world to come.

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